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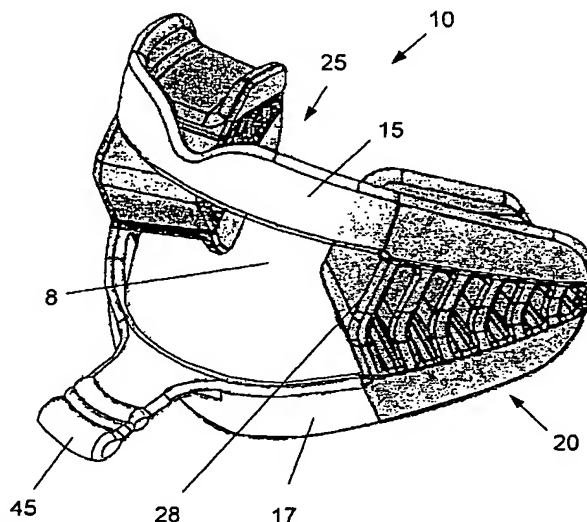
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- Published:  
— with international search report  
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[Continued on next page]

(54) Title: **DEVICE FOR SEPARATING BETWEEN THE UPPER AND LOWER JAWS AND METHOD OF USING THE SAME**



(57) Abstract: A device for separating between the upper and lower jaws is disclosed. The device comprises at least one substantially U-shaped rib and a deformable member associated therewith such that said member gradually changes its shape when a pressure is applied on the at least one rib by the jaws. The device is suitable for preventing self-inflicting or externally inflicted injury or for suppressing upper airway resistance syndrome, sleep apnea syndrome or snoring. By filling at least one reservoir formed in the deformable member with a beneficial or edible material and inserting the device into the oral cavity of a subject such that said deformable member separates an upper set of posterior teeth from a corresponding lower set of posterior teeth, the beneficial or edible material may be delivered to the subject.

WO 2004/054484 A3



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## INTERNATIONAL SEARCH REPORT

International Application No.

PCT/IL 03/01063

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 A61F5/56 A63B71/10

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A63B A61F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No.                                |
|------------|--|--|
| X          | DE 20 52 340 A (KIRKMAN LABORATORIES, INC.) 27 April 1972 (1972-04-27)<br><br>page 2, paragraph 3 - page 4, paragraph 2; figures   | 1,2,4,5,<br>7,14,15,<br>27,28,<br>30,31,<br>35,36,39 |
| X          | WO 95/14449 A (INGEMARSSON NATASHIA SONNIE ; VOSS TORSTEN DE (DK))<br>1 June 1995 (1995-06-01)<br>page 11, line 1 - page 12, line 9; figures 1-5,13<br><br>-----<br>-/-- | 1,3,4,<br>15,35,36                                   |

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&amp;" document member of the same patent family

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# INTERNATIONAL SEARCH REPORT

International Application No.

PCT/IL 03/01063

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No.                                |
|------------|--|--|
| X          | US 3 217 708 A (ROBERTS SHEPHARD D)<br>16 November 1965 (1965-11-16)<br><br>column 2, line 11 - column 3, line 14;<br>figures<br>----- | 1,2,4,5,<br>7,14,15,<br>27,28,<br>30,31,<br>35,36,39 |
| A          | GB 699 950 A (VICTOR HOWARD CARPENTER)<br>18 November 1953 (1953-11-18)<br>claim 1; figure 8<br>-----                                  | 16,29  |
| A          | US 5 570 704 A (AGRE BRIAN T ET AL)<br>5 November 1996 (1996-11-05)<br>column 4, line 64 - column 5, line 1;<br>figure 1<br>-----      | 28   |

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/IL 03/01063

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-16, 27-31, 35, 36 and 39

### Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-16,27-31,35,36,39

Device for separating the jaws comprising two U-shaped ribs and a deformable member positioned between them

1.1. claims: 1,2

Device for preventing injury

1.2. claims: 1,3

Device for suppressing certain breathing disorders

1.3. claims: 1,15,16

Device with arcuate member for incisors

1.4. claims: 1,35

Disposable device

1.5. claims: 1,36

Reusable device  
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2. claims: 1,17-26,40-45

Device or method using reservoir for beneficial or edible material  
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3. claims: 1,32

Device where rib and deformable member are different materials  
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4. claims: 1,33

Device where rib and deformable member are the same material  
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5. claims: 1,34

Device where the deformable member hardens after use  
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6. claims: 1,37,38

Device and packaging therefor  
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INTERNATIONAL SEARCH REPORT  
Information on patent family members

International Application No

PCT/IL 03/01063

| Patent document<br>cited in search report |   | Publication<br>date | Patent family<br>member(s) | Publication<br>date |
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| GB 699950                                 | A | 18-11-1953          | NONE                       |                     |
| US 5570704                                | A | 05-11-1996          | NONE                       |                     |